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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,789	11/14/2003	Alastair James Buchanan	1-24912	8772

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EXAMINER

MANCHO, RONNIE M

ART UNIT PAPER NUMBER

3663

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,789

Applicant(s)

BUCHANAN ET AL.

Examiner

Ronnie Mancho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Sawamoto et al (EP 0890470 A2).

Regarding claim 1, Sawamoto et al (abstract) disclose disclose a target object sensing apparatus for a host vehicle, the apparatus comprising:

a lane detection apparatus provided on the host vehicle which includes an image acquisition means adapted to capture an image of at least a part of the road ahead of the host vehicle (col. 6, lines 10 et. seq., line 33);

a vehicle path estimation means adapted to estimate a projected path for the host vehicle (e.g. col. 7, lines.28 to 54, abstract);

a target vehicle detection means located on the host vehicle which is adapted to identify the position of any target objects located on the road ahead of the host vehicle (Fig. 4), the position including data representing the distance of the target vehicle from the host vehicle;

first data processing means adapted to determine a target lane (abstract, fig. 3 and 4) in which the host vehicle will be located when it has traveled along the projected path by the distance to the target object (col. 9, lines 44 et. seq., fig. 7);

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second processing means adapted to compare the position of the target vehicle determined by the target detection means with the position of the target lane to provide a processed estimate of the actual position of the target object (col.7, lines 38 et seq., col. 9 lines 43 et seq.) .

Note! From fig. 7 in combination with the corresponding part of the description on page 9, line 44 etc, it is clear for the person skilled in the art, that the calculation means of the prior art are able to predict the position of the host vehicle in a future path (in particular lines 51 etc). This implies that also the position of the host vehicle can be estimated, when it has traveled by the distance to the target object.

In the prior art, the positions of all participants (host and target vehicles) are plotted in a absolute system of coordinates (col. 7 and col. 9) in order to be able to compare distances of objects on real and estimated paths.

Regarding claims 2-23, the prior art also anticipates the limitations therein. These claims suggest only slight constructional changes in the device of claim 1 which comes within the scope of one of high skill in the art.

Response to Arguments

3. Applicants' arguments filed 3/21/05 have been fully considered. Not all the arguments are persuasive. The argument regarding multiple dependency has been removed or withdrawn since the applicant had submitted amended claims before the first office action.

On the other hand, the rest of the arguments are not persuasive for the following reasons:

The applicants argue that the prior art, Sawamoto does not disclose “first data processing means adapted to determine a target lane in which the host vehicle will be located when it has traveled along the projected path by the distance to the target object”. In response, the examiner disagrees. First, Sawamoto (abstract, col. 7, lines 29-54) determines a future path to be traveled by a host vehicle. Sawamoto also determines the distance from the host vehicle to a target vehicle, wherein the target vehicle is in front of the host vehicle. Sawamoto continuously determines or predicts the path or lane of the host vehicle and also computes or determines a distance between the host vehicle and target vehicle. After the host vehicle travels past that particular distance to the target vehicle, the host vehicle continues to determine and predict the path of the host vehicle. Therefore, Sawamoto anticipates the claims.

Next, the applicants argue that Sawamoto does not predict which lane the host vehicle will be in. The examiner strongly disagrees. Sawamoto (abstract, col. 7, lines 29-54) predicts the lane or path of the host vehicle. In other words, Sawamoto plots a future path of the host vehicle. The applicants on page numbered 8 in their remarks are in contradiction by stating that Sawamoto estimates a future path of a host vehicle and then denying in a previous page that Sawamoto does not estimate a future path of a host vehicle. Applicants’ arguments drawn to Sawamoto using a yaw sensor makes no sense since the applicant also use a yaw sensor in their invention.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 571-272-6984. The examiner can normally be reached on Mon-Thurs: 9-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ronnie Mancho
Examiner
Art Unit 3663

5/24/05


THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 3600